



 **Manulife** Investment Management

Sustainability report

Real estate 2022

Message from Marc Feliciano

As a global real estate asset manager, we're committed to confronting sustainability challenges to make a positive impact on our environment and society. I'm pleased to present our 2022 Real Estate Sustainability Report as part of our commitment to transparency on our sustainable investing efforts.

In 2021, our global real estate portfolio was recognized as a GRESB Sector Leader¹ ranking first among its peer group for sustainability leadership. This is a significant achievement in a year where participation in the survey globally increased by 24%.

The strength of our assessment can be partly attributed to our ongoing focus on the health and well-being of our tenants, employees, and partners. We recognize the important role real estate managers can play in providing safer and healthier spaces. In 2021, we achieved the Fitwel[®] Viral Response Module certification with distinction for our North American real estate portfolio². As we move through the pandemic, the health and safety of our buildings remains a top priority.

We also worked to embed physical climate risk assessments and resilience across our practices and portfolios by developing our new proprietary Climate Change Resilience Building Standard. Our focus on awareness, evaluation, and integration supports our efforts to further protect our assets as we transition toward a low-carbon economy.

These achievements are in part why I joined Manulife Investment Management in early 2022. Sustainability isn't a solo journey, and these accomplishments reflect the passion and commitment of the sustainability team, led by Regan Smith, and everyone across our global real estate team. I'm proud to lead such a great group of real estate professionals.

As we move forward, we need to continue to think big to create value for our investors, grow our business, and make meaningful contributions to our sustainable future. We also need to focus on building a more diverse, equitable, and inclusive (DEI) workplace that fosters an environment of empowerment. I took this into great consideration when I selected members of the global real estate leadership team that will work alongside me in transforming our business. One initiative we've undertaken is to seek out partnerships with minority-led organizations. DEI is a matter close to my heart and I'm committed to taking it to the next level across our organization and our industry.

At Manulife Investment Management, we believe sustainability is a journey of continual improvement. We're taking what we're learning across the organization, the industry, and the world, and we're applying those lessons in our business each day. I'm confident we're heading in the right direction, and I thank you for coming along with us.

Marc Feliciano

Global Head of Real Estate Investments
Private Markets

1 Based on GRESB results released October 2021 cover the 2020 time period. GRESB Sector Leaders are the best performers by sector, region and nature of ownership from across the GRESB Assessments. The entity with the top score, as well as the entities with a score within 1 point of the top score in a category are recognized as Sector Leaders. Most current data shown. Manulife Investment Management paid a fee to be considered for the ranking. [gresb.com](https://www.gresb.com)

2 Certification achieved in 2021, for 2020-2021 efforts, by the Fitwel Viral Response Module for our efforts to ensure our properties are ready for a safe and healthy return to work. Certification is valid for 12 months. Please see [fitwel.org/viral-response-module](https://www.fitwel.org/viral-response-module)

Source: [gresb.com](https://www.gresb.com)

Q and A with Regan Smith

Regan Smith, Managing Director, Sustainable Investing, Real Estate Equity and Infrastructure

Q1 The healthy buildings movement seems to be gaining traction. Why now?

The pandemic brought to the forefront how interconnected buildings and human health are—both physical and mental. As real estate managers, we have an important duty to provide spaces that promote the well-being of our tenants, employees, partners.

In 2021, we partnered with Fitwel—a rigorous, third-party healthy building certification that sets the industry standard for evidence-based strategies to promote positive health outcomes for building occupants and communities. We've been working with our teams to ensure these science-based policies and procedures are implemented across our North American properties, and in 2021, we received certification for over 20 properties across our North American portfolio.¹

I'm pleased to see that the real estate industry has recognized the value that can be achieved by making decisions that prioritize people. [Having a healthy building is no longer optional](#), it's good practice management.

Q2 While many of us are conscious of the challenges that face our planet, how do we raise more awareness around climate change in the commercial real estate community?

Every job is evolving to be a climate job, and we all need to understand climate risk and opportunities. Addressing the issues requires collective effort and I believe education is a powerful tool to empower individuals to take positive action.

Climate change education is core to our stewardship values. We're working on developing various initiatives to support positive organizational change through processes, tools, and training programs that are designed to arm our real estate teams with the knowledge to make better informed decisions. In 2021, for example, we held an educational webinar for our asset managers and property operations teams on greenhouse gases, which we called 'GHG101'. Preserving and protecting nature is also key to addressing climate change. We invited several community partners that we work closely with to discuss how biodiversity loss is impacting our environment and what we can do to support nature together. This was both a lively and eye-opening discussion, and I'm looking forward to continuing the conversation on climate and nature with our partners in the community, our tenants, and our broader property management teams.

¹ Total rolling certifications since 2020, as of December 31, 2021, by the Fitwel Viral Response Module for our efforts to ensure our properties are ready for a safe and healthy return to work. Certification is valid for 12 months. Please see [fitwel.org](https://www.fitwel.org)

Q and A with Regan Smith

Regan Smith, Managing Director, Sustainable Investing, Real Estate Equity and Infrastructure

Q3 What nature actions are you undertaking to help ensure a resilient future for our communities?

As part of our stewardship journey, we're continuously evolving the ways in which the built environment can support local communities. For example, in Montreal we've partnered with an organization to create urban rooftop fruit and vegetable gardens where the harvest is donated to local groups. We've also partnered with an urban bee keeping company and host beehives across several of our North American properties.

More recently in 2021, we undertook a unique initiative right in our own backyard. Together with a community partner, we seeded an American elm tree growing at Manulife's global headquarters on Bloor Street in Toronto. The mother tree, which survived Dutch Elm disease, is a local historic and cultural landmark. From it we successfully custom grew 400 American elm seedlings, which we gave away to the local community in spring 2022.

Such initiatives can positively support the natural environment, and we'll be looking for more opportunities to contribute around the world, strengthening the connection between our global real estate portfolio and the communities it serves. I'm proud that we're doing our part to drive positive change.

Q4 Meeting the Paris Agreement will require collective action across governments, organizations, and individuals. How are you playing your part?

As a real estate owner and operator, we recognize we have an important role to play in helping the global transition to a low-carbon economy. With that in mind, we designed a strategy informed by climate science to reduce our carbon output across our real estate portfolio by 80% by 2050. As part of this greenhouse gas (GHG) reduction and low carbon transition plan, we established a process to advance property-level GHG reductions by leveraging our [Sustainable Building Standards](#) and by also creating a proprietary GHG workbook for properties to identify GHG reductions to include in operational and capital budgets.

We also must acknowledge the importance of addressing physical climate risk by [building climate resilience](#) within our real estate portfolios and across our real estate management practices. Resilience management is an ongoing initiative that continues to evolve rapidly. Our focus on awareness, evaluation, and integration supports us to further protect our assets as we transition toward a low-carbon economy and help the fight against climate change.



2021 *Performance* Highlights

We are pleased to report that we have been making excellent progress on advancing our five sustainability commitments.

1 Minimize our environmental impact

45,764 MWh of renewable energy. Purchased 45,764 MWh of renewable energy. Equivalent to removing 14,500 tCO₂e from the atmosphere.¹

32,126 MWh of energy saved. Equivalent to the energy used by approximately 1,200 Canadian homes.²

4,163 metric tonnes of waste diverted from landfill. Achieved an average portfolio waste diversion rate of 47%.

Buildings with a green building certification. Achieved an 82% global green building certification rate.³

2 Support health and wellness

Fitwel Viral Response Module (VRM). Achieved VRM certification with distinction for the North American real estate portfolio with over 20 properties achieving Viral Response Approval.⁴

3 Engage our stakeholders

Company-wide training. Hosted two training sessions for all property teams, focused on greenhouse gas (GHG) management and physical climate change resilience.

Employee recognition. Three teams were internally recognized as Innovation Sustainability Leaders for their contributions to driving innovative practices, improving sustainability performance, and exceeding expectations by going above and beyond to deliver engaging events for our tenants and communities.

Panel discussion on Nature and Biodiversity. Hosted a virtual panel with some of our closest sustainability partners to advance the discussion on nature and biodiversity. Featuring an all-female panel, we discussed the impacts that can be made in real estate, potential roadblocks to improving biodiversity across industries, and how we can continue the momentum to support nature-based solutions.

4 Promote responsible business practices

Sustainable development guidelines.

Established new guidelines to embed sustainability into our development process.

Continued industry engagement with Urban Land Institute (ULI) and Principles for Responsible Investment (PRI) working groups.

5 Be accountable for our performance

GRESB Sector Leader⁵ Ranked first among our peer group in the 'diversified - office/industrial' in the Americas category.

Data management. Improved data management systems in collaboration with our energy management partners.

Real estate climate disclosure. Launched inaugural TCFD-aligned Climate Risk disclosure for real estate.

¹ Source: www150.statcan.gc.ca ² Source: www150.statcan.gc.ca

³ Data is as of December 31, 2021. Based on square footage or building size of the gross floor area (GFA) of properties in the global portfolio. Totals from different certification standards do not sum as properties with multiple certifications are only counted once. Certifications are provided by LEED, Energy Star Certification or BOMA BEST, GBCA Greenstar, BCA Green Mark, NABERS, Casbee, BOMA360, Fitwel.

⁴ Total rolling certifications since 2020, as of December 31, 2021, by the Fitwel Viral Response Module for our efforts to ensure our properties are ready for a safe and healthy return to work. Certification is valid for 12 months. Please see fitwel.org/viral-response-module

⁵ Based on GRESB results released October 2021 cover the 2020 time period. GRESB Sector Leaders are the best performers by sector, region and nature of ownership from across the GRESB Assessments. The entity with the top score, as well as the entities with a score within 1 point of the top score in a category are recognized as Sector Leaders. Most current data shown. Manulife Investment Management paid a fee to be considered for the ranking. gresb.com

Objectives and Progress

2021	Status
Advance low-carbon strategy across portfolio, including property GHG reduction plans, and initiate internal carbon management working group	Achieved
Develop sustainable development guidelines for new construction development	Achieved
Achieve Fitwel Viral Response Module certification at the entity level ¹	Achieved
Measure portfolio-wide social impact metrics to establish baseline	Achieved
Develop and launch two new Sustainable Building Standards: “Climate Change Management” and “Climate Risk and Resilience”, and meet Level 1 across portfolio	Achieved
Inventory biodiversity initiatives and explore how to integrate biodiversity into tenant engagement programs	Achieved

2022

1 Address Climate Risk through:

GHG management: Build on our progress in 2021 to advance our greenhouse gas management strategy through:

- Completing property-level GHG workbooks and GHG reduction asset plans
 - Conducting a Scope 3 assessment
 - Preparing renewable energy credit guidance
- Increase the number of properties with climate resilience plans

2 Initiate a nature-positive strategy by:

Integrating nature into our investment due diligence and new developments

Revising our proprietary Sustainable Building Standards to include guidance on protecting nature

4 Advance reporting and ESG disclosures including launching a new ESG data management software platform

5 Develop sustainability training platform with educational modules for all employees

3 Develop Social Impact Framework that will include:

Integrating social impact factors into our investment due diligence, new development guidances, and asset management standards

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Approach

Vision

Our vision is to drive leadership in sustainable real estate across our global organization. Our employees, in collaboration with our tenants and local communities, work to provide healthy and efficient properties—today and into the future.

Approach to sustainability and responsible investing

We incorporate environmental, social, and governance (ESG) considerations into all our investment management and operational practices across the real estate value chain, from construction and acquisition of an asset through all aspects of property management and leasing. These practices are supported by resources such as our Sustainability in Investment and Due Diligence tool, sustainability clauses in our standard lease, and our proprietary Sustainable Building Standards.

Our [Sustainable Real Estate Framework](#) outlines our five sustainability commitments and details our key areas of focus. We then validate practices and performance through public and investor reporting and industry benchmarking.

We aspire to advance our **five Sustainable Real Estate Commitments** in everything we do.

1
**Minimize
our
environmental
impact**

2
**Support
health
and
wellness**

3
**Promote
responsible
business
practices**

4
**Engage our
stakeholders
on
sustainability**

5
**Be
accountable
for our
performance**

Managing Sustainability

We continue to advance sustainability initiatives for investments, operations, asset management, new developments, and leasing. To ensure that we are accountable to all stakeholders, we report on our performance using globally accepted standards and disclosure frameworks, including the Principles for Responsible Investment (PRI), CDP (formerly Carbon Disclosure Project), and GRESB Real Estate Assessment.

Due diligence and investment decision

We assess environmental risks such as contamination, natural hazards, health and safety, building sustainability performance, and climate risks.

ESG factors are reviewed by the investment team before closing.

Stewardship and portfolio monitoring

ESG factors such as environmental risks, energy and water consumption, waste diversion, and greenhouse gases are tracked for our investment selections and contribute to operational reduction targets in the properties we manage.

Reporting and collaboration

We produce an annual Real Estate Sustainability Report and communicate material ESG-related information to our investors in our quarterly reports.

We report to industry standards such as GRESB¹ and PRI² on an annual basis.

Sustainable Building Standards

Property operations make up the bulk of our environmental impact (energy, water, waste, and greenhouse gas emissions) and are the focus of our interaction with our employees, tenants, and community members. That's why we developed a comprehensive list of Sustainable Building Standards. In 2021, we added two new Standards (greenhouse gas management and climate resilience) covering our material sustainability aspects.

Manulife Investment Management's Sustainable Building Standards act as our guide to advancing sustainability within all buildings and regions. The Standards define requirements and best practices to property teams and encourage improvement.

Our standards allow us to:

- Meet industry expectations
- Drive leadership across our five Sustainable Real Estate Commitments
- Build a consistent sustainability experience for tenants, employees, and visitors
- Enable benchmarking of sustainability performance and understanding of business outcomes across our global portfolio
- Provide tools and resources for property teams

We continue to review and update our Standards to adapt to industry changes and ensure continuous improvement across our global portfolio.

¹ For more information on GRESB, please visit: [gresb.com](https://www.gresb.com) ² For more information on PRI, please visit: [unpri.org](https://www.unpri.org)

Diversity, Equity, *and* Inclusion

In 2020, our parent company, Manulife, announced that we would invest more than \$3.5 million over the next two years to promote DEI in the workplace and our communities. Over \$2 million has been allocated as of December 2021, to various diverse and underrepresented groups in supporting talent growth, hiring, and community support.¹

The goals of these investments include increasing the representation of diverse talent at all levels within the organization; creating greater inclusion across the company through enhanced training; and supporting organizations that help Black, Indigenous, and People of Color (BIPOC) communities.

Along with these initiatives and in addition to already existing gender targets, Manulife has set additional leadership and recruitment goals:

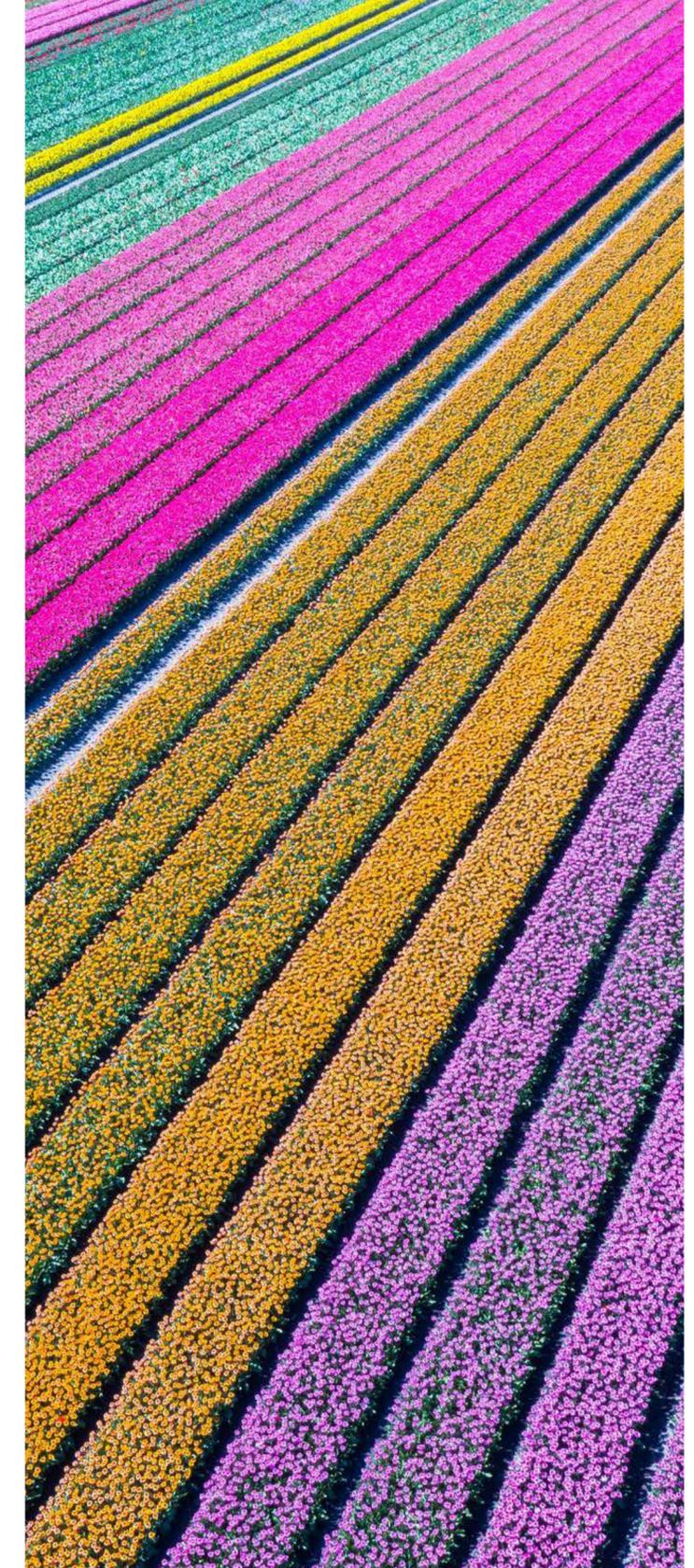
- Achieve 32% female representation at the VP+ level
- Annually hire at least 25% BIPOC talent in our graduate program
- Increase BIPOC representation in leadership roles by 30% by 2025

Within Real Estate, we've been working hard to understand our role in providing a diverse and equitable workplace. Together, we are committed to being transparent about our DEI challenges and taking steps to address them. We acknowledge that measuring the support of our DEI efforts is challenging, but we're working on ways to improve this.

Metric²

Number of total employees	398
Percent female	35%
Percent BIPOC (North America only)	17%
Percent AVP female	17%
Percent AVP BIPOC (North America only)	14%

While we have made progress in some areas, we know we have more work to do and are committed to addressing the needs of our employees, ultimately fostering a culture of inclusivity within all communities where we operate.



¹ As of December 31, 2021, [manulife.com](https://www.manulife.com) ² As of February 2022.

Case Study #1

Expanding our Sustainable Building Standards: Integrating climate change and resilience¹

Climate change is one of the greatest challenges we face today. For our buildings and our communities, it poses both physical and transitional risks.

To help guard against these risks, in 2021, we developed two new Sustainable Building Standards: Climate Change Resilience and GHG Management and Planning.

Climate Change Resilience

To develop the Climate Change Resilience Standard, we used forward-looking, third-party climate risk data to evaluate our global portfolio's exposure to climate and extreme weather risks. These risks include floods, sea-level rise, extreme windstorms, wildfire, heat stress, water stress, and earthquakes. We also inventoried our entire portfolio for property resilience—the presence of features and practices such as risk awareness, resilience management, emergency management, business continuity, and building attributes that help mitigate climate risks.

The resulting Climate Change Resilience Sustainable Building Standard incorporates risk and resilience practices into property operations. It enhances property resilience through a range of initiatives, including education, emergency planning, and resilience assessments and improvements. To support our property teams with education and implementation of this new Standard, we provided company-wide training and a Property Resilience Toolkit. The Toolkit helps teams screen and prioritize resilience improvements based on their climate risk exposure and existing resilience measures and practices.

GHG Management and Planning

Reducing our carbon footprint is critical to the global transition to a low carbon economy and to our long-term success.

Our internally-created Carbon Management Working Group developed the GHG Management and Planning Standard to help asset management and property operations teams to create emissions reduction plans. These asset-level plans aim to support meeting our long-term GHG emissions reductions target.

Integrating education, opportunity identification, and emissions reduction planning into operations allows our property and asset management teams to reassess the practical and financial implications of reduction pathways. In 2022, we plan to globally roll out expert guidance and proprietary tools to help each asset build their decarbonization plan and budget.

¹ The case study/ies shown here are for illustrative purposes only, do not represent all of the investments made, sold, or recommended for client accounts, and should not be considered an indication of the ESG integration, performance, or characteristics of any current or future Manulife Investment Management product or investment strategy. Manulife Investment Management conducts hundreds of ESG engagements each year but does not engage on all issues or with all issuers in our portfolios. We also frequently conduct collaborative engagements in which we do not set the terms of engagement but lend our support in order to achieve a desired outcome. Where we own and operate physical assets, we seek to weave sustainability into our operational strategies and execution. The case studies shown are a sampling across issues and geographies. Our approach to ESG investing and incorporation of ESG principles into the investment process differs by investment strategy and investment team. It should not be assumed that an investment in the company discussed herein was or will be profitable. Actual investments will vary and there is no guarantee that a particular fund or client account will hold the investments or reflect the characteristics identified herein. [Please see our ESG policies for details.](#)

Case Study #2

From the ground up: Integrating ESG into developments

As a long-term owner, we know it's critical to manage ESG throughout the lifecycle of our assets. In 2021, we formalized our approach to ESG integration into new developments in recognition that our development pipeline presents one of the earliest opportunities to manage risk and capitalize on opportunity.

Our approach integrates ESG considerations throughout the entire development process, from early planning and design stages, through to construction and eventual handover of the completed building. Integrating ESG from the start of a new development helps us:

- Get ahead of increasingly stringent regulations
- Ensure completed buildings meet tenant and investor expectations
- Position assets to contribute to ESG goals and performance of our standing portfolio
- Apply a forward-looking lens to building design and performance so our assets can positively contribute to the broader society

Integrating ESG into developments also compels us to consider the construction sector's role in the transition to a low-carbon economy and to more fully appreciate the importance that indirect impacts, such as embodied carbon from building materials, can have on the climate.

To enable our team to apply our approach, we have created a suite of proprietary tools. These include design requirements that address minimum energy performance, consideration for net-zero design, embodied carbon assessments and contributions to de-carbonized transportation, biodiversity, and health and well-being. The tools also focus on our development activities, such as working with like-minded development and construction partners, considering the environmental impacts of site selection, ensuring a safe construction site, and gathering and addressing input from local communities. We're currently gathering market feedback from development partners and other stakeholders so we can continue to fine tune our minimum design requirements.

We're excited by the positive feedback we've received so far from the industry. It's clear there's enthusiasm to collaborate on our ambitious low-carbon goals.

Case Study #3

Sector leadership: GRESB ranks global real estate portfolio first in peer group¹

In 2021, we achieved a new milestone: We were recognized by GRESB as a Sector Leader, ranking first in our peer group for our global real estate portfolio.¹

GRESB is the global standard for assessing the ESG performance of real estate companies and funds. By scoring and benchmarking a collection of standardized data, GRESB provides investors with transparency on how well companies and funds are managing material ESG issues, such as energy consumption, greenhouse gas emissions, corporate governance, and employee and tenant satisfaction and well-being.

In 2021, over 1,500 entities participated in the GRESB assessment. This represents nearly 117,000 individual assets with a total value of \$5.7 trillion USD². Sector Leaders are the best performers across the entire GRESB assessment, categorized by sector, region, and nature of ownership.

Our global portfolio covers our direct real estate investments around the world, including all funds and our General Account. GRESB evaluates our management of these assets through formal ESG policies, processes, and programs we have in place. Furthermore, GRESB rates our assets' actual ESG performance to determine the impact of our efforts and initiatives.

Our 2021 results highlight the strength of our ESG integration practices. Contributing to this top ranking were our portfolio-wide reductions in greenhouse gas emissions, energy and water consumption, as well as improvements in waste output and diversion.

Manulife Investment Management has participated in GRESB since 2018. The annual assessment is a crucial part of our ESG strategy. It provides on-going transparency to our investors, allows us to better understand our strengths, and helps identify areas where we can continue to improve. We look forward to continued participation in 2022.

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2 Please see: [gresb.com](https://www.gresb.com)

Case Study #4

Fitwel Viral Response Module Certification

In 2021, we secured the Fitwel Viral Response Module (VRM) certification with distinction at the entity-level.¹ This achievement is part of our commitment to furthering sustainability efforts across our real estate portfolio and the focus on the ongoing health and well-being of our tenants, employees, and partners.

Fitwel is the world's leading certification system committed to "Building Health for All®." Originally created by the U.S. Centers for Disease Control and Prevention (CDC) and U.S. General Services Administration, Fitwel is a rigorous, third-party healthy building certification that sets the industry standard for evidence-based strategies to promote positive health outcomes for building occupants and communities.

Receiving entity-level certification signifies Manulife Investment Management's consistent wellness, design, development, and operation policies across our North American portfolio. These rigorously reviewed policies and procedures for safe and healthy infrastructure will be implemented across our 58.5 million square foot North American real estate portfolio.

In 2021, over 20 properties achieved Fitwel Viral Response approval in North America² (which signifies that a property has aligned with the specified practices and policies detailed in Manulife Investment Management's Viral Response Module certification). We're proud of our achievements and look forward to the continued implementation across our North American real estate portfolio.

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² Total rolling certifications since 2020, as of December 31, 2021, by the Fitwel Viral Response Module for our efforts to ensure our properties are ready for a safe and healthy return to work. Certification is valid for 12 months. Please see fitwel.org/viral-response-module

Case Study #5

Requirements for our third-party real estate managers

In 2021, we made the strategic decision to migrate our US real estate platform to third-party property managers to oversee the operation of our buildings.

To ensure our standards and reporting requirements are upheld in the highest manner, we developed a rigorous selection process for third-party property managers which specifically take into account sustainability considerations in accordance with the Manulife Real Estate Sustainable Procurement Guidelines.

Our property management agreements act as a roadmap for implementation of our sustainability practices. We closely oversee third-party property managers and require them to adhere to our proprietary sustainability policies, to provide updates twice per year according to our own Sustainable Building Standards, to provide utility bills on a monthly basis and to provide requested metrics for information on, for example, waste audits and diversion reports, energy audits, refrigerant or diesel consumption, tenant engagement activities, and occupancy counts.

We also provide third-party property managers with the Sustainability in Asset Management Checklist to use in developing annual property reviews, budgets and capital plans. The Checklist does not prescribe specific practices but provides a structured means of addressing sustainability risks and opportunities and ensures sustainability budget items are not overlooked. We've also developed an annual third-party property manager scorecard to rate compliance with property management agreements, including a qualitative assessment on delivery against our expectations.

The migration to third-party property managers will help us achieve a significant business objective—to grow our geographical footprint across the United States. Simultaneously, liaising with property managers, who interact with other real estate investment managers, promotes industry collaboration and alignment on best sustainability practices.

Performance

COVID-19 continued to impact our environmental performance in 2021. We saw pandemic restrictions lift and get reinstated throughout the year impacting our energy and water consumption, greenhouse gas emissions, and waste generation. Regardless, we worked to sharpen our focus and engage across the business and stakeholders to deliver strong environmental results.

Energy¹

	2021	2020	2019	2018	2017
Absolute energy use (eMWh)	686,478	733,304	803,261	837,145	798,323
Normalized energy use intensity (ekWh/sf) ²	18.4	19.8	23.3	23.8	23.7

Buildings consume substantial amounts of energy and water and generate approximately 40% of greenhouse gas emissions, globally. As building owners and managers, we seek to minimize our environmental impact by investing in resource efficiency and look to embed conservation practices into our operations.

In 2021, our total energy consumption was 684,478 eMWh. Comparing our like-for-like portfolio, our energy decreased 4.8%, equivalent to the energy required to power 1,200 Canadian homes.

Across our global portfolio, we decreased normalized energy use intensity to 18.4 ekWh per square foot, a reduction of 7.1% and 22.4% compared to 2020 and 2017, respectively. Our 2021 performance surpasses our five-year 10% energy target, however COVID-19 related occupancy changes in 2021 continue to make target progress monitoring complex. Next year, we will assess our 2022 target performance and determine our approach to future target setting.

Water³

	2021	2020	2019	2018	2017
Absolute water use (m ³)	2,343,638	2,287,139	2,520,652	2,579,437	2,564,789
Normalized water use intensity (L/sf) ⁴	58.2	53.4	62.0	65.8	67.3

In 2021, our water consumption increased due in part to the re-opening of our buildings, resulting in a 0.4% increase in like-for-like consumption. Our normalized water use intensity also increased between 2020 and 2021 to 58.2 litres per square foot. Although our consumption increased in 2021, we are still 13.4% lower than our 2017 base year and are on track to meet our 5 year reduction target of 7.5%.

1 Energy data includes electricity, natural gas, heating oil and steam consumption. **2** 2017-2019 Energy intensity is normalized for weather, occupancy (where data is available) and extraordinary use. 2020 and 2021 Energy intensity is only normalized for weather and extraordinary use due to the impact of COVID-19 on occupancy normalization. 2020-2017 values restated due to data updates. **3** 2020-2017 values restated due to data updates. **4** 2017-2019 water intensity is normalized for occupancy (where data is available) and extraordinary use. 2020 and 2021 water intensity is only normalized for extraordinary use due to the impact of COVID-19 on occupancy normalization.

Performance

Waste

	2021	2020	2019	2018	2017
Recycled waste (tonnes)	4,163	5,889	8,448	9,395	9,037
Waste to landfill (tonnes)	4,695	6,013	8,137	8,140	7,504
Waste diversion rate (%)	47	48	46	47	48

Our total waste generation decreased by 3,000 metric tonnes. Our average diversion rate for 2021 was 47%, a 1% decrease from 2020. Looking forward, we will continue to make waste management a priority and look for opportunities to increase diversion and reduce waste generation across our portfolio.

Greenhouse gas emissions¹

	2021	2020	2019	2018	2017
Scope 1 emissions (tCO ₂ e) ²	36,571	37,772	39,606	37,086	32,468
Scope 2 emissions (tCO ₂ e) ³	103,180	115,153	129,585	160,642	156,642
GHG intensity (kgCO ₂ e/sf)	3.8	3.9	4.6	4.9	5.0

To help mitigate the impacts of climate change, Manulife is committed to reducing our greenhouse gas emissions and transitioning toward low-carbon energy sources. In 2021, our total greenhouse gas (GHG) emissions were 139,752 tCO₂e, a reduction of 13,173 tCO₂e compared to 2020. In addition, we purchased more than 45,500 MWh of renewable energy, across our portfolio.

To drive GHG reductions and support meeting our 80% reduction target by 2050, we integrated GHG management and reduction into our Sustainable Building Standard program. This aims to facilitate education, opportunity identification and emissions reduction planning to help property and asset management teams assess reduction pathways and financial implications to create realistic emissions reduction plans. We also developed an associated GHG Management Workbook which we piloted in 2021 and plan to roll-out in 2022.

¹ Location based emissions. 2020-2017 values restated due to data revisions and operational control updates. ² Scope 1 includes emissions from natural gas, diesel and refrigerant emissions. Refrigerant and diesel emissions are only included in 2021-2019. ³ Scope 2 includes emissions from purchased electricity and steam.

Looking *ahead*

Real estate's role in supporting climate resilience and positive social change

Real estate has a vital role to play in climate change mitigation; almost 40% of greenhouse gas emissions are driven by the sector.¹ This isn't an issue that'll be resolved overnight; the need to address climate change will be a key focus for the real estate industry over the next two decades, and it presents both a challenge and opportunity. Many real estate organizations are investing a lot of effort to reduce their GHG emissions, however doing so in an efficient manner requires significant capital expenditure and human resources. It's no longer enough to simply believe an organization is playing their part, investors need to undertake due diligence to truly understand what organizations are doing before allocating capital. In the coming years, this area is where we will be spending time, capacity and resources to efficiently reduce greenhouse gases across our portfolio.

Looking ahead, we're excited to be advancing the conversation and finding meaningful opportunities to quantify the 'S' in ESG — our social responsibility. While we've been committed to positively impacting the health and wellbeing of the properties we own and manage, and our impact on the communities we operate, there's more that can be done. Diverse procurement practices and sustainable human capital are some ideas that we're exploring. While it's early days, we're excited about furthering developing our social impact strategy. Real estate provides an asset class that has the ability to leverage the transition to a low carbon economy, provide shelter from physical climate risk, provide healthy spaces and host biodiversity. We are looking forward to the opportunities ahead. We hope you are too.



¹ Source: worldgbc.org

Learn more about our policies and disclosures:

Real Estate

[Real estate sustainability framework](#)

[Real estate climate disclosure](#)

Manulife Investment Management

[Stewardship report](#)

[SRI report](#)

[Climate-related financial disclosure](#)

[Sustainable investing and sustainability risk statement](#)

[Climate change statement](#)

[Responsible contracting statement](#)

manulifeim.com/realestate/en/sustainability/approach-and-highlights

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